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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,326	10/22/2003	Viktor V. Jarikov	86541RLO	3589

7590 05/09/2006

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EXAMINER
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GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/691,326

Applicant(s)

JARIKOV ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-147 is/are pending in the application.
- 4a) Of the above claim(s) 2-10, 13, 15, 18-48, 51-59, 62-79 and 81-146 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 11, 12, 16, 49, 50, 60, 61, 80 and 147 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This Office action is responsive to the amendment dated March 1, 2006. Claims 1 and 16 were amended. Claims 2-10, 13, 15, 18-48, 51-59, 62-79 and 81-146 are withdrawn. Claims 1, 11, 12, 16, 49, 50, 60, 61, 80, and 147 are under consideration [claim 147 was previously omitted from consideration].
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The rejection of claim 16 under 35 U.S.C. 112, first paragraph, set forth in the last Office action (mailed January 9, 2006), paragraph 10 (b), is withdrawn due to the amendment.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 1, 11, 12, 14, 16, 17, 49, 50, 60, 61, and 80 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
  - a. Claim 1 still recites the negative limitation “wherein the first component is not an amino-substituted perylene”. It is not seen where the specification provides full support for the scope of this limitation. Support is provided in the specification to exclude

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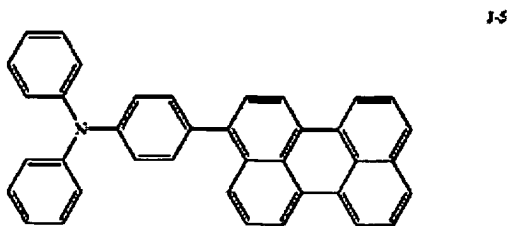
specifically diarylamino, dialkylamino, and arylalkylamino substituents; however, the negative limitation as written excludes more amino substituents than those specifically mentioned and set forth by the specification. Accordingly, the negative limitation is still considered to be new matter.

b. Claim 1 now recites “and wherein the host does not produce light”. It is not seen where the specification expressly states that absolutely no light is produced from the host. There is a discussion of emission spectrums that are dominate from the combination of ingredients, but it is not clear that no light at all is produced from the host. Accordingly, the new limitation “and wherein the host does not produce light” is considered to be new matter.

***Claim Rejections - 35 USC § 102/103***

6. Claim 147 is rejected under 35 U.S.C. 102(e) as being anticipated by Oh et al. (US 2003/0118866 A1). Oh et al. disclose an electroluminescent device comprising co-hosts Alq3 and compound “J-5” with dopant DCJTB (see par. 122, page 18). The ratio is 1:1:0.02.

Compound J-5 is the following perylene derivative:



Oh et al. disclose further perylene derivatives on pages 5 and 6.

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7. Claims 1, 11, 12, 14, 16, 17, 49, 50, 60, 61, 80 and 147 are rejected under 35 USC 102(b) as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over Aziz et al. (US 6,392,250). Aziz et al. discloses a device comprising a mixed light emitting region comprising preferred electron transport material Alq3 (see col. 9, lines 37-45) and at least one dopant (see col. 10, lines 63) including perylene (see col. 10, line 67) and pyran DCJTB (see col. 11, lines 48-51). The dopants, which include "first component" perylene and dopant DCJTB are incorporated in an amount of 0.05-10 wt. % (see col. 12, lines 10-12) per instant claims 11 and 16. With regard to claim 12, Alq3 as the electron transporting material of the Aziz et al. device for the mixed region is included in an amount of 30-70 % wt. (see col. 12, lines 8-11). In alternative that Aziz et al. is insufficient to anticipate a device comprising two dopants including perylene and DCJTB, it would have been obvious to one of ordinary skill in the art at the time of the invention to have formed a device comprising Alq3, perylene and DCJTB in the same light emitting layer according to the teachings of Aziz et al.

8. Claims 1, 11, 12, 14, 16, 17, 49, 50, 60, 61, 80 and 147 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz (US 6,392,250) in view of Fujita et al. (US 2003/0137241). Aziz et al. discloses in analogous art a device comprising a mixed light emitting region comprising preferred electron transport material Alq3 (see col. 9, lines 37-45) and at least one dopant (see col. 10, lines 63) including perylene (see col. 10, line 67) and pyran DCJTB (see col. 11, lines 48-51). The dopants, which include "first component" perylene and dopant DCJTB are incorporated in an amount of 0.05-10 wt. % (see col. 12, lines 10-12) per instant claims 11 and 16. With regard to claim 12, Alq3 as the electron transporting material of the Aziz et al. device for the mixed region is included in an amount of 30-70 % wt. (see col. 12, lines 8-11).

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Although Aziz et al. clearly teaches “perylene and the like” as suitable fluorescent dopant material for the Aziz et al. device, which reads upon the “first component” of the instant claims, Aziz et al. fails to set forth specific perylene derivative compounds according to the claim 80 formula. Fujita et al. discloses in analogous art it is known to add substituent groups to light emitting perylene and use the compounds in an organic electroluminescent device (see Fujita Formula (1) and description of substituent groups). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a substituted perylene compound as taught by Fujita in the Aziz et al. device, because Aziz et al. teaches that perylene and perylene-like compounds are suitable for the mixed light emitting region of the device.

#### ***Response to Arguments***

9. Applicant's arguments filed March 1, 2006 have been fully considered but they are not persuasive.

Applicant argues the perylene taught by Aziz et al. is not a host material. The examiner submits that Aziz et al. '250 teaches “first component” perylene may be present in an amount of 10% (see col. 12, lines 10-12). The claims merely require at least 1 % volume for the first component (see instant claim 11). Accordingly, the Aziz et al. '250 teaching meets the claim requirement for a first component host. Applicant has further added the limitation wherein the host does not emit light. The examiner submits that Aziz et al. sets forth the combination of same ingredients required by applicant and in same the amounts required by applicant. The properties of these same components and how they interact with one another (i.e., light emission produced) would be the same absent evidence otherwise.

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Applicant states that "Selection of proper conditions and luminescent layer components is clearly taught in the present invention. Therefore, Aziz et al. is not only an irrelevant but also ineffective reference since it cannot be used to teach one skilled in the art how to practice the present invention and moreover, teaches away from it." The examiner submits that all of the same components required by applicant in the same amounts are taught by Aziz et al. '250. The reference is not required to discuss and recognize all the properties and advantages of their invention. The rejection of product claims is based upon the structure and composition of the product. In response to applicant's argument that Aziz et al. does not appreciate all of the aggregation properties of the present application, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

With regard to applicant's argument that Aziz et al. do not teach having both perylene and DCJTB in the same layer, Aziz et al. clearly teaches at least one dopant is used (which includes using more than one dopant) and both DCJTB and perylene derivatives are suitable. Aziz et al. never teaches away from using two dopants together or more specifically, from using these two together.

Applicant argues "the perylene dopant of Aziz et al. and the first component perylene of the present invention are deemed to have different functions, properties, and capabilities." In response, it is not seen where applicant has provided data or results to support this statement. Per M.P.E.P. § 2145, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geiseler*, 116 F.3d 1465,

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43 USPQ2d 1362 (Fed. Cir. 1997). Applicant argues the references “do not disclose that the addition of perylene at relatively high concentrations, as to promote aggregate formation, improves lifetime.” The examiner submits that the teachings of Aziz et al. meet the concentration requirements for perylene as set forth in the present claims. Applicant’s “relatively high concentrations” are only “at least 1% volume” as set forth in instant claim 11 and Aziz et al. sets forth an amount of up to 10 wt. %.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Dawn Garrett  
Primary Examiner  
Art Unit 1774

May 5, 2006